

# Pranav Minasandra

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Interests	Novel and generally applicable theories of behaviour in animals; methods to explore behavioural dynamics. I am particularly interested in the dynamics of behaviour at the intersection of multiple timescales, and the <i>behavioural algorithms</i> used by animals to express individual, collective, and social behaviour.	
Employment	Max Planck Institute of Animal Behaviour, Konstanz, Germany Postdoctoral researcher; IMPRS-QBEE Postdoc Awardee.	2024 - now
Education	Max Planck Institute of Animal Behaviour, Konstanz, Germany PhD [Dr. rer nat] <i>magna cum laude</i> - International Max Planck Research School of Quantitative Behaviour, Ecology, and Evolution. Thesis: “ <i>Exploring sequences of behaviour across scales and species.</i> ”	2020 - 2024
	Indian Institute of Science (IISc), Bengaluru, India - Master of Science in Biology - Bachelor of Science (Research) in Biology	2015 - 2020
Publications	<ol style="list-style-type: none"><li>Minasandra, P., Grout, E. M., Brock, K., Crofoot, M. C., Demartsev, V., Gersick, A. S., Hirsch, B. T., Holekamp, K. E., Johnson-Ulrich, L., Nayak, A., <i>et al.</i> Behavioral sequences across multiple animal species in the wild share common structural features. <i>PNAS</i>. (in press). doi:<a href="https://doi.org/10.1101/2024.01.20.576411">10.1101/2024.01.20.576411</a> (2025).</li><li>DeNicola, V., Mezzini, S., Bursac, P., Minasandra, P. &amp; Cagnacci, F. Effects of vasectomy on breeding-related movement and activity in free-ranging white-tailed deer. <i>Movement Ecology</i>. (in press) (2025).</li><li>Minasandra, P., Jensen, F. H., Gersick, A. S., Holekamp, K. E., Strauss, E. D. &amp; Strandburg-Peshkin, A. Accelerometer-based predictions of behaviour elucidate factors affecting the daily activity patterns of spotted hyenas. <i>Royal Society Open Science</i> <b>10</b>, 230750. doi:<a href="https://doi.org/10.1098/rsos.230750">10.1098/rsos.230750</a> (2023).</li><li>Grout, E. M., Ortega, J., Minasandra, P., Quin, M. J., Crofoot, M. C., Strandburg-Peshkin, A. &amp; Hirsch, B. T. Whole Group Tracking Reveals That Relatedness Drives Consistent Subgrouping Patterns in White-Nosed Coatis. <i>Animal Behaviour</i> <b>216</b>, 175–193. ISSN: 0003-3472. doi:<a href="https://doi.org/10.1016/j.anbehav.2024.08.010">10.1016/j.anbehav.2024.08.010</a> (2024).</li><li>Kunjar, S., Strandburg-Peshkin, A., Giese, H., Minasandra, P., Sarkar, S., Jolly, M. K. &amp; Gradwohl, N. Link updating strategies influence consensus decisions as a function of the direction of communication. <i>Royal Society Open Science</i> <b>10</b>, 230215. doi:<a href="https://doi.org/10.1098/rsos.230215">10.1098/rsos.230215</a>.</li><li>Minasandra, P. &amp; Isvaran, K. Truncated power-law distribution of group sizes in antelope. <i>Behaviour</i> <b>157</b>, 541–558. doi:<a href="https://doi.org/10.1163/1568539X-bja10012">10.1163/1568539X-bja10012</a> (2020).</li></ol>	
Awards and fellowships	IMPRS Postdoctoral Award 6 months of pay at the scale of a postdoctoral researcher. [32,350 €]	2024-
	ISBE Travel Award 2500 AUD [≈1,500 €].	2024

	<b>DAAD - Graduate Student Scholarship Programme</b> Nominated after evaluation of my proposal. [≈60,000€]	2020 - 2024
	<b>Kishore Vaigyanik Protsahan Yojana</b> Govt. of India scholarship for exceptional undergraduates in science. <i>All India Rank : 135</i> Includes stipend and contingency	2015 - 2020
<b>Mentorship</b>	<b>Amlan Nayak</b> <i>Master's thesis:</i> Spatial variation of vigilance in meerkats.  <b>Ananya Passi</b> <i>Summer research:</i> Mathematical modelling of habitat use and population dynamics.	
<b>Teaching</b>	<b>Introduction to Git</b> <i>Instructor and organiser:</i> Biannual workshop offered at the MPI of Animal Behavior.  <b>Introduction to remote code servers like GitHub</b> <i>Instructor and organiser:</i> Biannual workshop offered at the MPI of Animal Behavior.  <b>L<sup>A</sup>T<sub>E</sub>X for academic documents</b> <i>Instructor and organiser:</i> Annual workshop offered at the MPI of Animal Behavior.  <b>Quantitative Ecology: Research Design and Inference</b> <i>Teaching assistant:</i> Taught coding in R, conducted several classes, graded assignments, managed course website.	2019
<b>Talks and posters</b>	<b>[Invited] CES Seminar Series</b> <i>Indian Institute of Science, Bangalore</i> “Exploring sequences of behaviour in the wild across scales and species”  <b>International Society of Behavioural Ecology Meeting</b> <i>Melbourne, Australia</i> “Sequences of behaviour show a common statistical structure across species”  <b>Gessellschaft für Primatologie Annual Conference</b> <i>Konstanz, Germany</i> “How animals behave: Sequences of behavior show a common statistical structure across species”  <b>Descriptive &amp; Normative Models of Collective Behaviour</b> <i>School of Mathematics, University of Leeds</i> “Looking into hyena daily activity patterns using accelerometers”  <b>Animal Behaviour Society - Virtual Seminar 2021</b> “Behavioural classifier provides insights into spotted hyena behaviour”	2024 2024 2024 2022 2021
<b>Technical skills</b>	<i>Programming languages and related</i> Python, Julia, R, Bash, L <sup>A</sup> T <sub>E</sub> X, and C. HTML, CSS, and git.  <i>Specialised computational skills</i> Parallel processing; Machine learning; Front-end development in R <b>Shiny</b> ; Agent-based models.  <i>Mathematical modelling</i> Dynamical (PDE) models incorporating spatial and stochastic variables; Non-linear dynamics, including population- and evolutionary dynamics; Probability models; Numerical simulations of all the above.	

**References**

**Dr Ariana Strandburg-Peshkin,**  
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**Dr Alex L Jordan,**  
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**Dr Andrew Berdahl,**  
University of Washington  
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**Prof Meg Crofoot,**  
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